**LAT (B-3): sc-373706**

**BACKGROUND**

T cell receptors activate immune responses by recognizing antigen and initiating a cascade of intracellular signal transduction events, eventually culminating in cell proliferation and differentiation. Both protein tyrosine kinases and PLCγ are activated by this event. LAT, or linker for activation of T cells, is an integral membrane protein that has been shown to associate with PLCγ1, as well as GRB2 and the p85 subunit of PI3-kinase. Binding of these signaling molecules to LAT is associated with phosphorylation of LAT by ZAP-70/Syk tyrosine kinases. LAT appears to play a role in activation of transcription mediated by AP-1 and NFAT following stimulation of the T cell receptor, suggesting that it acts as a linker protein in T cell activation. LAT protein is palmitoylated, and this modification is required for its tyrosine phosphorylation and localization to glycolipid-enriched microdomains.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: LAT (human) mapping to 16p11.2; Lat (mouse) mapping to 7 F3.

**SOURCE**

LAT (B-3) is a mouse monoclonal antibody raised against amino acids 1-233 representing full length LAT of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2b, kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LAT (B-3) is available conjugated to agarose (sc-373706 AC), 500 µg/0.25 ml agarose in 1 ml, for IP, to HRP (sc-373706 HRP), 200 µg/ml, for WB, IHC/P and ELISA; to either phycocerythrin (sc-373706 PE), fluorescein (sc-373706 FITC), Alexa Fluor® 488 (sc-373706 AF488), Alexa Fluor® 546 (sc-373706 AF546), Alexa Fluor® 594 (sc-373706 AF594) or Alexa Fluor® 647 (sc-373706 AF647), 200 µg/ml, for WB (RGB), IF, IHC/P and FCM; and to either Alexa Fluor® 680 (sc-373706 AF680) or Alexa Fluor® 790 (sc-373706 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

LAT (B-3) is recommended for detection of LAT of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for LAT siRNA (h): sc-37595, LAT siRNA (m): sc-37596, LAT shRNA Plasmid (h): sc-37595-SH, LAT shRNA Plasmid (m): sc-37596-SH, LAT shRNA (h) Lentiviral Particles: sc-37595-V and LAT shRNA (m) Lentiviral Particles: sc-37596-V.

Molecular Weight of LAT: 36-38 kDa.

Positive Controls: LAT (m): 293T Lysate: sc-127084, HuT 78 whole cell lysate: sc-2208 and BYOP whole cell lysate: sc-364388.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG BP-HRP: sc-516102 or m-IgG BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG BP-FITC: sc-516140 or m-IgG BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**DATA**

LAT (B-3): sc-373706. Western blot analysis of LAT expression in non-transfected 293T: sc-117792 (A), mouse LAT transfected 293T: sc-127084 (B), BYOP (C) and HuT 78 (D) whole cell lysates.

LAT (B-3): sc-373706. Western blot analysis of LAT expression in WR16: whole cell lysate (A) and rat thymus tissue extract (B).

**STORAGE**

Store at 4°C. **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**RESEARCH USE**

For research use only, not for use in diagnostic procedures.

**PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.